

WHAT IS CLAIMED IS:

1. An injector particularly for a vacuum die-casting apparatus, comprising an injector body provided with at least one first opening for  
5 injecting/aspirating protective gas, and at least one second opening for loading molten material, which are arranged in order of operation, said injector body being further provided with a chamber for containing material and for the sliding of a piston for pushing the material into a die, said injector comprising means for cleaning and lubricating the external surface  
10 of the piston which are arranged in order of operation on a corresponding supporting element which is separate from the injector body.

2. The injector according to claim 1, wherein said means for cleaning are constituted by a scraper ring.

3. The injector according to claim 2, wherein said means for lubricating  
15 are constituted by at least one lubricant injection nozzle which is arranged radially with respect to the piston at at least one circumferential groove.

4. The injector according to claim 3, wherein said scraper ring is arranged after the circumferential groove with respect to the piston advancement direction.

20 5. The injector according to claim 1, wherein said first opening is arranged after the second opening with respect to the piston advancement direction.

6. The injector according to claim 1, wherein said supporting element is constituted by a plate-like element for guiding and supporting the piston.

25 7. The injector according to claim 1, wherein said first opening is connected to a pressurized protective-gas circuit.

8. A method for injection in a die, particularly for a vacuum die-casting apparatus, comprising the steps of:

cleaning and lubricating an outer surface of a piston of an injector body;  
30 introducing material in a molten state, in a protective-gas atmosphere, in

a containment chamber of the injector body, while the piston is motionless for a controlled time period;

aspirating the protective gas until a vacuum is generated in the die and in the injector body;

- 5     injecting the molten material into the die; and  
allowing the casting to cool.

9. The method according to claim 8, wherein said time interval is controlled by a time indicator.

- 10    10. The method according to claim 8, wherein said time interval is controlled by a signal which measures the amount of material introduced in the injector body.